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AGO D/A ltr, 29 Apr 1980

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IN REPLY REFER TO

AD 861827

AGDA (M) (30 Oct 69) FOR OT UT 693050

5 November 1969

SUBJECT: Operational Report - Lessons Learned, Headquarters, 538th Engineer Battalion, Period Ending 31 July 1969

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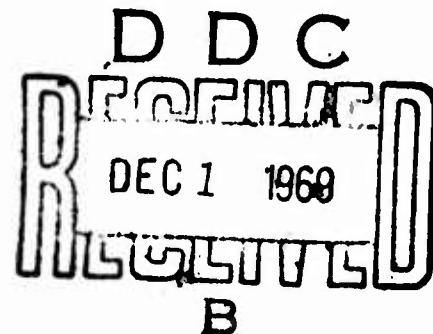
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DEPARTMENT OF THE ARMY  
Headquarters, 538th Engineer Battalion (Construction)  
APO San Francisco 96232

THCON-AOP

2 August 1969

SUBJECT: Operational Report of the 538th Engr Bn (Const)  
for the Period Ending 31 July 1969 RCS CSFOR-65  
(RI) UIC WBAN AA

1. SECTION 1, OPERATIONS: SIGNIFICANT ACTIVITIES

a. Mission: The 538th Engineer Battalion (Construction) continues to execute its assigned missions by performing the troop construction portion of Camp Samae San Cantonment and Depot Complex near Sattahip, Thailand, and accomplishing civic action projects.

b. Location: The 538th Engineer Battalion plus 697th Engineer Company (Pipeline), are located at Camp Samae San near Sattahip, Thailand (see Incl 1). The 561st Engineer Company (Construction), minus earthmoving platoon, and D Company, 23rd Engineer Battalion Royal Thai Army are located at Camp Lightning, Thailand, (see Incl 2 & 3).

c. Significant Activities:

(1) Vertical Construction: Vertical construction in the Camp Samae San Cantonment Area, Depot Complex, and Post Engineer Complex comprised the major portion of the Battalion's operations during this reporting period. Facilities under construction are semipermanent in nature, constructed of concrete block, bolted wood trusses, asbestos-cement roofing, and permanent glass windows. All of the facilities have finished interiors. The buildings have complete latrine facilities and electrical wiring, and some are equipped with air conditioning. Construction is similar to that in many CONUS installations. To date, the battalion has completed 297,000 square feet of vertical construction at a total cost of \$2,628,000. Incl 4 shows completed facilities, those under construction, and future projects.

(a) Camp Samae San Cantonment Area: Camp Samae San is a 1740-man cantonment area required to support the Depot Complex and Deep Water Port (see Incl 3). Table I describes the Battalion's efforts during the past quarter

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in the Cantonment area.

TABLE I

Projects Completed

<u>Project</u>	<u>Cost</u>
Library	\$ 36,600
Quartermaster Sales Store	27,065
Signal Battalion HQ Building	22,689
6th Company Area	111,020
2 EM Billets, 5th Co Area	32,270
HQ Building, 5th Co Area	22,167
Thai Security Guard Billets (4)	83,764
Thai Security Guard Dayroom	9,122
BOQ's (3)	79,950
PASCOE Maintenance Bld'gs, 30' X 60' (4)	25,600
Motor Maintenance Shops	47,640
POL Laboratory (Deep Water Port)	27,852
TOTAL	\$525,739

Projects Under Construction

<u>Project</u>	<u>Status (% Complete)</u>
Chapel	39%
APO	74
PX/Snack Bar	5
Finance	27
Area Headquarters	5
BOQ's (3)	10
Provost Marshal Office	15
POL Dispensing Point	30

(b) Camp Samae San Depot Complex (Consolidated Supply Activity): The Depot Complex, including headquarters, stock control facilities, open and closed storage is occupied by the 9th Logistical Command. Vertical construction in the area was completed last quarter.

(c) Camp Samae San Post Engineer Complex: The Post Engineer Complex, designed to support the Cantonment Area and the Depot Complex, was started during the past

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quarter. Table II provides information pertaining to work accomplished by the Battalion in this complex.

## TABLE II

### Projects Completed

<u>Project</u>	<u>Cost</u>
PASCOE Service Bld'gs and Whses, 40' X 100' (3)	\$ 56,000

### Projects Under Construction

<u>Project</u>	<u>Status (% Completed)</u>
Post Engineer Administration Building	31%

(2) Horizontal Construction: The Battalion earth-work mission is divided into two activities. The first is the preparation for paved roads and hardstands, and the second is the preparation of earth pads for vertical construction sites. The swampy area upon which Camp Samae San is constructed requires extensive earthfill up to two meters in depth. A total of 200,000 cubic meters of laterite fill and 56,000 cubic meters of sand were hauled during the quarter. The Battalion organic earthmoving capability was augmented by a 48" wide contract belt loader and fifteen contract dump trucks. The contract asphalt plant continues to supply the 2" thick asphalt concrete pavement for the roads and parking areas of Camp Samae San. A total of 10,160 tons of pavement were laid during this reporting period. This quantity completed the contract for 26,772 tons, and covered an area of 123,073 square meters (see Incl 6). A new asphalt contract was recently negotiated which provides 8,000 additional tons of asphalt concrete, primarily to pave hardstands in the Depot Complex. Total area to be paved is 43,700 square meters, scheduled for completion prior to 20 Sept 1969 (see Incl 6).

(a) Camp Samae San Cantonment Area: Horizontal construction effort in the cantonment area consisted primarily of building site preparation, fill for three additional motor parks, and completion of the athletic area. In addition, equipment and man hours were continuously

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devoted to improvement of the drainage system. A Total of 37 culverts w/reinforced concrete headwalls were installed during this reporting period.

(b) Sattahip Depot Complex: Currently in the Consolidated Supply Activity (CSA) horizontal operations primarily involve construction of open storage areas and upgrading drainage.

(c) Post Engineer Complex: As in the Depot Complex, horizontal operations in the Post Engineer Complex during the last quarter consisted of filling, compacting and final grading of storage areas.

(3) Utilities Systems:

(a) Water Distribution: The network of water mains for distributing potable water throughout Camp Samae San was completed 31 July 1969 by the 697th Engineer Company (Pipeline). During this quarter, 2,780 feet of water pipe were installed, finishing the 63,500 feet programmed in the system. In addition, line construction companies laid 4,120 feet of 2" and 4" steel pipe secondary laterals from the main lines to buildings under construction. Additional secondary laterals will be laid as buildings are started.

(b) Sewage Collection and Treatment: The system of mains for waterborne sewage was also completed this quarter by the 697th Engr Co (PL). 5,350 feet of asbestos-cement pipe sewer mains were placed, bringing the total length of the system to 67,988 feet. 3,762 feet of cast iron and asbestos cement laterals from buildings to the mains were installed by the line construction units of the Battalion. Additional laterals will be installed as vertical construction proceeds.

(c) Primary Electrical Distribution System: The majority of the 12,000 volt primary electrical distribution system was finished during this reporting period with the installation of 9,489 feet of primary transmission lines. 2,692 feet of secondary wiring and 12 transformer banks were installed to provide electricity to facilities in the area. Remedial repair work, installation of transformer banks



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and secondary distribution lines to future buildings constitute the scope of electrical work remaining to be completed.

(4) Security Fence and Lighting: Camp Samae San and the Depot Complex are to be inclosed by approximately 10 miles of chain link and wire security fence. The entire perimeter will be illuminated with mercury vapor security lights. During this reporting period 6.0 miles of fence were installed. A total length of 7.5 miles of fence has been installed to date.

(5) Rehabilitation of Tank Farm, Udorn RTAFB: During the past quarter, the first pipeline construction platoon of the 697th Engr Co (PL) completed the rehabilitation of the JP-4 Tank Farm manifold system at Udorn RTAFB in Northeast Thailand. Twelve hundred feet of 3, 4, 6 & 8 inch welded steel pipe and fittings were installed. The project was completed on 12 July 1969.

(6) Disassembly of Tank Farm No. 1 Camp Vayama: During this reporting period, Tank Farm No 1, Camp Vayama, Northwest of Camp Samae San (see Incl 3) was dismantled by the 697th Engr Co (PL). Five 10,000 barrel and one 1,000 barrel high bolted steel storage tanks, as well as over four miles of coupled tactical steel pipe and associated hardware, were disassembled and stored for turn-in to project stock. The project was completed on 30 July 1969.

#### d. Civic Action Projects

##### (1) Small Area Projects

(a) Prefabricated School Bldg: Company B, 538th Engr Bn (Const), erected a prefabricated school building in an area northwest of Camp Samae San. The building, previously displayed at the Cholburi Trade Fair during April 1969, is now being used by Thai School children who previously had to travel great distances to attend school, or did not attend school at all.

(b) Emergency Firefighting Assistance: Responding to an urgent call from the Post Engineer Fire Department, the men of the 538th Engineer Battalion (Const)



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manned bulldozers, water distributors, and supporting equipment to help extinguish a fire rampaging out of control in a lumberyard in the nearby village of Kilosip. For seven hours, the men worked side-by-side with Local Nationals to successfully construct a fire break and save the village from the flames.

(c) Interdenominational Retreat House: The Battalion donated 1,800 concrete block culls to the Reverend Roger Godbout for the construction of an interdenominational retreat house in vicinity of KM 145 on Sukhumvit Highway, near Choburi, Thailand.

(d) Temple Grounds Project: Equipment operators of A Co, 538th Engr Bn, accomplished leveling and grading operations on the grounds of Wat Hinlad, a Buddhist temple compound north of Camp Lightning. An access road to a small village near the Wat was graded and drainage ditches cut.

(2) Medical Treatment: The Battalion Surgeon and his staff treated 1,303 Thai Civilians during the past quarter.

e. Annual Command Inspection: COL Downs, Deputy Commander, USARSUPTHAI, made the annual USARSUPTHAI Command Inspection of the 538th Engr Bn (Const) on 8 July 1969. He was accompanied on his inspection of the Battalion Area and job sites by COL Hatch, CO 44th Engr Gp (Const) and twelve members of the USARSUPTHAI Staff.

f. Change of Command: The 538th Engineer Battalion (Const) changed commanding officers on 20 June 1969, when outgoing commander LTC St. Clair Streett passed the Battalion Colors to the new commanding officer LTC Bernard C. Hughes. Prior to joining the Battalion, LTC Hughes was Director of the U.S. Army Engineer Nuclear Cratering Group at Livermore, California. LTC Streett departed the Battalion for a Department of Defense assignment in Washington, D.C.

g. Organization: The 538th Engineer Battalion (Const) continues to operate under the MTOE 115-P03.

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2. SECTION 2 LESSONS LEARNED: COMMANDERS OBSERVATIONS,  
EVALUATIONS, AND RECOMMENDATIONS.

a. Personnel:

(1) Battalion Disposition

(A) OBSERVATION

(i) Present distribution of the enlisted grades in the Battalion and attached units is as follows:

538th Engr Bn (Const)

	<u>E9</u>	<u>E8</u>	<u>E7</u>	<u>E6</u>	<u>E5</u>	<u>E4</u>	<u>E3/1</u>	<u>Total</u>
Auth	1	8	27	56	175	454	141	862
Asgd	1	7	19	24	101	352	115	619
PDY	1	6	15	22	92	307	102	545

561st Engr Co (Const)

	<u>E9</u>	<u>E8</u>	<u>E7</u>	<u>E6</u>	<u>E5</u>	<u>E4</u>	<u>E3/1</u>	<u>Total</u>
Auth	0	1	6	13	48	152	30	250
Asgd	0	1	4	9	35	97	36	182
PDY	0	1	2	4	20	63	17	107

697th Engr Co (PL)

	<u>E9</u>	<u>E8</u>	<u>E7</u>	<u>E6</u>	<u>E5</u>	<u>E4</u>	<u>E3/1</u>	<u>Total</u>
Auth	0	1	3	7	26	78	59	174
Asgd	0	0	1	6	14	85	25	131
PDY	0	0	1	6	12	74	22	115

Recapitulation

	<u>E9</u>	<u>E8</u>	<u>E7</u>	<u>E6</u>	<u>E5</u>	<u>E4</u>	<u>E3/1</u>	<u>Total</u>
Auth	1	10	36	76	249	684	230	1286
Asgd	1	8	24	39	150	534	176	932
PDY	1	7	18	32	124	444	141	767

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(ii) Present distribution of the officers and warrant officers in the Battalion and attached units is as follows:

<u>538th Engr Bn (Const)</u>	<u>Officers</u>	<u>Warrant Officers</u>
AUTH	33	10
ASG	37	6
PDY	36	6
<u>561st Engr Co (Const)</u>		
AUTH	6	1
ASG	7	1
PDY	7	1
<u>697th Engr Co (PL)</u>		
AUTH	5	0
ASG	5	0
PDY	5	0

(iii) Critical MOS shortages are as follows:

<u>MOS</u>	<u>JOB TITLE</u>	<u>GR</u>	<u>AUTH</u>	<u>ASGD</u>
51F40	Pipeline Insp	E7	1	0
51H40	Const Foreman	E7	12	8
62B40	Engr Eq Rep Supv	E7	4	1
51H40	Const Foreman	E6	19	7
62B40	Engr Eq Rep Supv	E6	3	1
82B40	Const Surveyor Supv	E6	1	0
91C20	Clinical Spec1	E6	1	0
51G20	Soils Analyst	E5	2	1
62F30	Crane Shovel Opr	E5	19	8
73C20	Pay Disbursing Spec1	E5	2	0
82B20	Const Surveyor	E5	5	0
91B20	Medical Spec1	E5	4	1
51G20	Soils Analyst	E4	4	1
51K20	Plumber	E4	19	7
52F20	Electrician	E4	19	6
64B20	Hvy Veh Dvr	E4	56	27
73C20	Pay Disbursing Spec1	E4	3	0
82B20	Const Surveyor	E4	3	0
91B20	Medical Spec1	E4	9	3
62B10	Engr Eq Rpmn	E3	57	13

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(iv) The following officers arrived in the  
Command this quarter:

<u>RANK</u>	<u>NAME</u>	<u>TITLE</u>
LTC	Hughes, Bernard C.	Bn Commander
MAJ	Pitre, George L. Jr.	Bn Executive Officer
MAJ	McKee, Anthony J.	S-3 Officer
CPT	Hollis, Anthony M.	Chaplain
CPT	Crawford, Lawrence	CO, Co C
CPT	Russell, Ruhr	CO, HHC
1LT	Rowe, Richard H.	Adjutant
2LT	Flamang, Michael A.	Const Engr, S-3
CW2	Snowden, Dewey K.	Unit Sup Tech, S-4
2LT	Hauser, William J.	Plt Ldr, Co B
2LT	Kaczmarek, Michael B.	Plt Ldr, Co C
2LT	Comstock, Chester A.	Plt Ldr, Co D
2LT	Jenion, Milson N.	Plt Ldr, Co D
2LT	Ida, John J.	Const Off, Co D
2LT	Bowser, Walter D.	Exec Off, 561st
2LT	Zilly, Joseph C.	Const Off, Co C
2LT	Housley, Cary W.	Plt Ldr, Co D
2LT	Stevens, Howard W.	Plt Ldr, 561st
2LT	Nitta, Milton K.	Plt Ldr, Co B

(B) EVALUATION: The impact of NCO and MOS shortages on the construction capability of the Battalion is being minimized by the continued use of Local National tradesmen, acting SGT E5's and comprehensive cross training programs in critical skill areas. Local National (LN) tradesmen have significantly augmented the organic construction skill capability of the Battalion. The use of acting SGT E5's has proved beneficial in meeting supervisory requirements inherent in the use of LN laborers. Cross training in critical skill areas is a limited asset due to continuing overall personnel shortages.

(C) RECOMMENDATION: That continued emphasis be given to filling the personnel shortages within the Battalion; that the use of Local National tradesmen be continued to augment the construction capability of the Battalion.

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(2) Personnel Section

(A) OBSERVATION: This Battalion's TO&E personnel section was consolidated with the 256th Personnel Service Company, Sattahip Detachment, on 5 March 1969. This consolidation resulted in the transfer of all but two of the Battalion's TO&E personnel positions to the 256th PSC. On 25 April the Sattahip Detachment of the 256th was moved to Camp Friendship (Korat, Thailand), a distance of 225 miles.

(B) EVALUATION:

(i) With the departure of the 256th Personnel Co & the 538th Engr Bn Personnel Section to Korat, the Battalion is still experiencing problems as stated in the last report. The major problems are:

(a) Two weeks are required for the Bn to receive special orders from time of the initial request. Delay in orders pertaining to reassignments, courts-martial, and field grade Article 15's have the biggest impact.

(b) A personal check of Battalion records requires 3 days due to the travel time between Camp Samae San and Korat.

(ii) The Battalion attempts to minimize these delays by the use of the telephone and the courier flights. With the advent of ADPS on personnel actions, it is anticipated that these delays will be minimized.

(C) RECOMMENDATIONS: That the 538th Engr Bn and the 256th Per Co continue to cooperate and monitor all personnel actions and requests for orders.

b. Operations

(1) Construction Management

(A) OBSERVATION: The Battalion has undertaken a comprehensive program to develop sound construction management techniques.

(B) EVALUATION: During this reporting period

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the 538th Engineer Battalion (Construction) focused on further development of construction management techniques. Management tools used included the following:

- (i) Master construction schedule
- (ii) Comprehensive CPM project schedules integrating personnel, material and equipment requirements
- (iii) Detailed materials requirements schedules
- (iv) Daily personnel and equipment disposition reports
- (v) Daily job site inspections
- (vi) Daily Battalion operations meetings
- (vii) Weekly Battalion planning and scheduling conferences.

The use of comprehensive CPM project studies has proved the most effective means of positive management at the platoon and company level. Junior officers, heretofore inexperienced in construction techniques, have developed rapidly and the requirement for thorough analysis, planning, and execution has been highlighted through the emphasis on accurate CPM studies. Job site operational effectiveness, intracompany coordination, flexibility, and quality control have markedly improved. At the Battalion level, more comprehensive use of plans, specifications, and construction schedules has resulted in a broadened and more accurate master schedule, timely reaction to engineering and supply problems, and expeditions allocation of Battalion resources.

(C) RECOMMENDATION: That development and utilization of construction management techniques continue to be emphasized at all levels of command in this Battalion and other units with construction missions.

(2) Quality Construction Inspection Checklist:

(A) OBSERVATION: The 538th Engr Bn (Const) has implemented a Quality Construction Inspection Checklist as



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a quality control vehicle to insure the best possible finished product.

(B) EVALUATION: Regularly scheduled job site inspections indicated that despite good comprehensive planning and scheduling practices, the constructing units were overlooking small but important construction details, either through lack of technique or simple oversight. To assist in solving this problem, a checklist was implemented, not only to aid project officers and NCO's but to inform and guide construction personnel at all levels. Checklist items included all phases of construction from foundations to electrical fixtures. This checklist has been continually updated. Since its implementation, the checklist has proved a valuable quality control aid for producing a professional end product in all phases of construction at Camp Samae San.

(C) RECOMMENDATION: That continued steps be taken by this unit in all areas of construction to produce the best possible finished product.

### (3) Control of Earthmoving Functions

(A) OBSERVATION: Earthmoving missions at Camp Samae San have been varied in scope, location and priority, demanding flexible concepts of control.

(B) EVALUATION: Both the centralized and decentralized concepts of control have been utilized in the earthmoving effort at Camp Samae San. For missions which are so large in scope as to significantly exceed the resources of any one company, such as the preparation of the roads and hardstands for paving, planning and execution have been centralized under the Battalion S-3, shortening the span of control, with excellent results. Missions less demanding whose location and scope vary, however, have been planned and scheduled so that individual companies can accomplish them under unit control using organic resources and maintaining unit integrity. This decentralized concept of control has proved the most efficient means of completing earthmoving tasks remaining in the Camp Samae San area.

(C) RECOMMENDATION: That organic lines of control continue to be utilized with flexibility proportionate



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to the magnitude of the earthmoving mission, and that the centralized concept of control be considered only for missions with a scope location and priority significantly exceeding the resources of any one organic unit.

(4) Equipment Augmentation

(A) OBSERVATION: Shortages in authorized TOE equipment have been augmented by contract and non-TOE engineer equipment.

(B) EVALUATION: During the last reporting period the battalion experienced the requirement for contract equipment augmentation either due to shortages in authorized equipment or special equipment requirements. Augmentation with contract equipment proved a satisfactory solution to overcoming mission-essential equipment shortages and enabled the battalion to meet critical construction deadlines. Table III lists non-TOE equipment utilized by the battalion the past quarter.

TABLE III

Backhoe, tractor mt'd	4 ea
Transit-mix trucks, concrete	2 ea
Belt loader, 48"	1 ea
Dump truck, 6 cu. yd.	15 ea
Gradall, 600C	1 ea
"Cherry picker" Hydraulic Mobile Utility basket	1 ea
Compactor, vibrating plate	2 ea
Earth auger, truck mt'd	1 ea

(C) RECOMMENDATION: That equipment augmentation be continued with non-TOE mission-essential engineer items until such time as full TOE equipment strength levels are reached.

(5) Concrete Batch Plant

(A) OBSERVATION: This unit has developed and constructed a centrally located concrete batching facility.

(B) EVALUATION: Bulk concrete requirements for the construction at Camp Samae San have run as high as

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110 cubic yards per day. Previously, the battalion utilized two contract transit-mix trucks, operating from a batching facility to meet bulk requirements. Recently, a new batching facility was constructed using four (4) organic 16S mixers. Designed to provide either wet or dry batches, the plant uses modified 5 ton dump trucks to deliver the materials to job sites. Dry batches are delivered to 16S mixers spotted on job sites in a dump truck with a four compartment bed, each compartment holding a four-sack batch. Wet mix is delivered in a dump truck with a modified tailgate, segmented chute, and flow control gate. Segregation of the wet batch while being transported to the site is minimal as the maximum distance to any site is 1.5 miles. Both dry and wet batches are measured by weight for quality control of the mix. This singular feature is provided for by a two-compartment hopper with balance beam scales, which measures aggregate and sand by weight before dropping it into the skip of the 16S mixer (or the back of the dry batch dump truck). The plant is capable of delivering concrete of many compressive strengths by simply adjusting the scales and dumping the hoppers. As of 31 July, the plant is still undergoing trial batching runs and production data is limited. Anticipated delivery rates are 30-40 cubic yards per hour at full capacity.

(C) RECOMMENDATION: That other construction units with bulk concrete requirements and short haul distances consider this method of producing and delivering concrete.

(6) Positive Control of Ground Water in Sewer Line Construction

(A) OBSERVATION: Sewer line excavations require positive control of ground water so that foundations are firm and no water flows through the line during construction.

(B) EVALUATION: In sewer and water line excavations at Camp Samae San, ground water is a continual problem. To alleviate the problem, sand dams are placed every 100 feet in the ditch. At the base of each sand dam, a sump is dug which collects excess construction water which is pumped out of the ditch until the water elevation is below the desired grade of the bed. Sand is placed at

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the far end of the excavation, working towards the sump. As the sand bed is laid and compacted, it displaces water in the ditch into the sump, which is continually pumped out. While the sand serves to move the water away from the construction site, the water increases the compaction of the sand, providing a smooth stable bed for the sewer line. Once the pipe is laid up to the sump, the process is repeated for the next 100 feet of line.

(C) RECOMMENDATION: That this construction technique be incorporated in construction manuals and U. S. Army Engineer School lesson plans.

c. Training

(1) OBSERVATION: During this reporting period the Battalion conducted a regular program of instruction and training in basic military subjects and mission-oriented subjects.

(2) EVALUATION: Training in mission-oriented subjects was aimed at improved quality of construction, professional performance, and cross training in critical MOS shortages. Classes were given in construction management, construction drafting, operation and maintenance of the 16S Mixer, Materials Take-Offs, and heavy equipment operation, with positive results. Cross training in critical MOS areas resulted in a balance of high skill levels throughout the Battalion, with improved quality control and professional performance.

(3) RECOMMENDATION: That continued emphasis be placed on training in mission-oriented subjects as well as on training in basic military subjects.

d. Intelligence: N/A

e. Logistics

(1) Revised Requisitioning Procedures, NSN Items

(A) OBSERVATION: Requisitions for Nonfederal Stock Numbered (NSN) construction materials were rejected because depots could not identify requested items.

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(B) EVALUATION: For requisitioning purposes, construction materials are categorized as FSN or NSN. Until recently, when requisitioning NSN items, only the Federal Supply Class was recorded on the requisition (ie 5600-NSN) resulting in rejections from Depot. Research of supply publications and coordination with Customer Service, Inventory Control, 9th Logistical Command, provided a very effective solution. For requisitioning NSN items, manufacturers name, code and part numbers are utilized reducing the number of rejections, increasing the use of US manufactured items and reducing gold flow through local procurement.

(C) RECOMMENDATION: That units requisitioning NSN construction material use manufacturers codes and parts numbers when FSN's have not been assigned.

## (2) Scheduling Construction Materials Delivery

(A) OBSERVATION: Critical path methods are utilized to formulate materials requirement schedules for the construction at Camp Samae San.

(B) EVALUATION: Construction at Camp Samae San involves more than 5000 class IV line items. To meet scheduled materials requirements on 15 or more job sites all in various stages of completion, critical path methods have been utilized to schedule materials delivery in direct conjunction with construction schedules prepared by units for each project. To date, timely materials delivery has been considerably improved and critical materials more easily identified and procured. Continual improvement in Class IV supply delivery is anticipated.

(C) RECOMMENDATION: That materials scheduling by critical path method directly related to prepared construction schedules be utilized to the maximum to insure timely delivery of construction materials.

## (3) Maintenance

### (a) Maintenance Procedures

(i) OBSERVATION: The Battalion performs before and after operations motor stables and daily scheduled

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maintenance on 10% of all operational equipment.

(ii) EVALUATION: Maintenance continued to be an area of command interest during this reporting period. Emphasis was placed on keeping mission essential equipment operational & in good repair. Daily before and after operations motor stables were effective in maintaining the critical balance of essential equipment. Additionally, daily scheduled maintenance on 10% of all equipment assured the availability of equipment for thorough and beneficial checks by trained organizational maintenance personnel. Adherence to such procedures has resulted in a significant reduction in deadline rates and the continued availability of mission essential equipment.

(iii) RECOMMENDATION: That command emphasis at all levels on mission oriented maintenance be continued.

(b) Rapid Wearing of Cutting Teeth

(i) OBSERVATION: The average life of cutting teeth on several different types of equipment has been one to two days in the abrasive soil conditions in the Camp Samae San Area.

(ii) EVALUATION: Cutting teeth have been built up by welding additional steel to the worn surfaces and treating cutting edges with low-hydrogen hard surface welding rods prior to use. This treatment provides a sixfold increase in the life of the cutting teeth.

(iii) RECOMMENDATION: That cutting teeth on the appropriate type of equipment be modified prior to use as indicated.

f. Organization: N/A

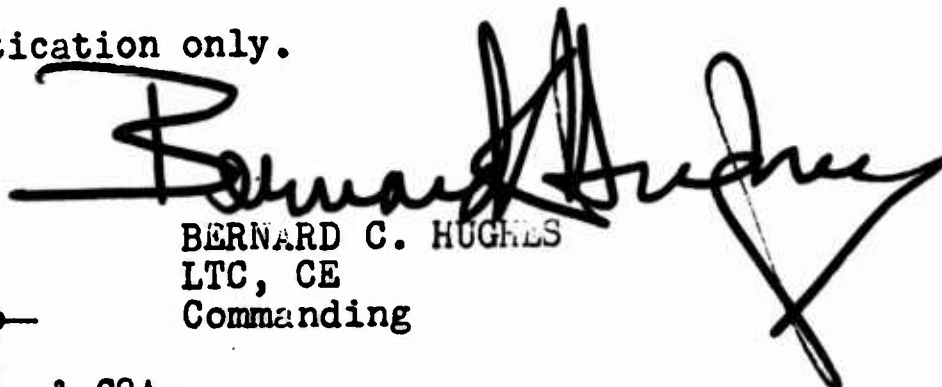
g. Other: N/A

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This page for authentication only.



BERNARD C. HUGHES  
LTC, CE  
Commanding

30 Incls

- ~~1. Location Map~~
- ~~2. Unit Location Map~~
- ~~3. Site Map~~
- ~~4. Plan of Cantonments & GSA~~
- ~~5. Omitted~~
- ~~6. Paving Map~~
- ~~7. Unit Organization~~
- ~~8-30 Construction Photographs~~

Incls 1 - 30 wd HQ, DA



THOP-MH (22 Sep 69) 1st Ind  
SUBJECT: Operational Report of the 538th Engineer Battalion  
(Construction) for the Period Ending 31 July 1969,  
RCS CSFOR-65 (R1) WBAN AA

DA, Headquarters, United States Army Support, Thailand  
APO 96233 24 SEP 1969

THRU: Commander in Chief, United States Army Pacific  
ATTN: GPOP-DT, APO 96558

TO: Assistant Chief of Staff for Force Development,  
Department of the Army, Washington, D.C. 20310

The Operational Report of the 538th Engineer Battalion  
(Construction) has been reviewed and is forwarded with the  
following comments:

a. In reference to para a (1) (A) (iii) Section 2,  
critical MOS shortages are the result of cancelled requisition  
items by OPO, DA. During the months of June and July 1969,  
respectively, 48 and 106 previously validated requisition  
items for the 538th Engineer Battalion were cancelled. This  
necessitated re-requisition action by this headquarters with  
an early fill action.

b. Reference para a (2) (B) Section 2:

(1) The transition from the battalion UPO concept to  
the PSC concept normally creates some administrative problems  
until effective liaison is established between the battalion  
PSNCO and the different divisions within the PSC.

(2) Requests for orders can be processed on a timely  
and efficient basis provided:

(a) Reassignment orders are anticipated and requested  
prior to the effective date.

(b) Correct formats and transaction codes are utilized.

(c) Requests are routed through proper channels, for  
example, requests initiated at unit level are routed through  
the battalion PSNCO who has responsibility for checking val-  
idity and correctness of such requests.

(3) The 256th PSC does not process court-martial orders.  
Special court-martial orders are promulgated by the battalion  
and the SJA. This headquarters requests General court-martial  
orders.



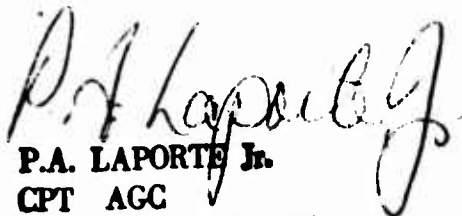
THOP-MH (22 Sept 69) 1st Ind 24 SEP 1969

SUBJECT: Operational Report of the 538th Engineer Battalion  
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(4) Requests for directing reduction, forfeiture, etc., under Article 15, UCMJ, must be accompanied by a copy of the Article 15 form properly authenticated by the commander imposing the punishment. In some instances, requests for orders have been returned for corrective action and a copy of the form.

c. Concur with all other evaluations and recommendations. Appropriate action will be taken to initiate recommendations.

FOR THE COMMANDER:

  
P.A. LAPORTE Jr.  
CPT AGC  
Asst. Adjutant General

GPOP-DT (2 Aug 69) 2d Ind

SUBJECT: Operational Report of HQ, 538th Battalion (Construction) for  
Period Ending 31 July 1969, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 14 OCT 69

TO: Assistant Chief of Staff for Force Development, Department of the  
Army, Washington, D. C. 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:



C. L. SHORTT  
CPT, AGC  
Asst AG

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